

REMARKS

Claims 1-48 are pending, with claims 1-18 rejected under 35 U.S.C. §103(a) as obvious over Black (Patent No. 6,397,070) in view of Soliman (Patent No. 5,859,838); claims 19-20 and 34-35 rejected as obvious over Black in view of Attar et al. (Pub. No. 2004/0202136); and claims 21-48 rejected as obvious over Black in view of Attar et al., further in view of Soliman. The Office Action also rejects all claims on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-41 of co-pending Application No. 2005/0111407 (10/876,979). Applicant respectfully notes that the double-patenting rejection is improper, and traverses all of the claim rejections.

The Double Patenting Rejection

The Office Action rejects claims 1-48 on the ground of nonstatutory obviousness-type double patenting with respect to co-pending Application No. 2005/0111407, asserting that the claims in the co-pending applications are “not patentably distinct from each other.” Although Applicant disagrees with this characterization of the claims, this issue is moot in view of the impropriety of the rejection.

“Double patenting may exist between an issued patent and an application filed by the same inventive entity, or by a different inventive entity having a common inventor, and/or by a common assignee/owner.” (MPEP 804(I)(A).) If an examiner becomes aware of two co-pending *applications* with claims that would raise an issue of double patenting if one of the applications issues as a patent, then the examiner may issue a *provisional* rejection on the ground of double patenting. (MPEP 804(I)(B).) If a provisional rejection is the only remaining rejection in the earlier of the co-pending applications, then it should be withdrawn and the application allowed to issue without a terminal disclaimer. (MPEP 804(I)(B)(1).)

The cited reference in the double-patenting rejection is a co-pending application, not an issued patent. Therefore, the nonstatutory double patenting rejection should be withdrawn. Furthermore, even if the Examiner concludes that a provisional double patenting rejection is appropriate, the present application was filed 7 months earlier than the co-pending application. Thus, a terminal disclaimer in this application would never be appropriate. In view of the below arguments regarding the other rejections in the present Office Action, Applicant believes that the claims as amended are allowable, and that maintaining even a provisional double patenting rejection would therefore be inappropriate. Applicant respectfully requests that the nonstatutory double patenting rejection be withdrawn.

Claim Rejections – 35 U.S.C. §(103) – Claims 1-18

The Office Action rejects claims 1-18 under 35 U.S.C. §103(a) as obvious over Black (Patent No. 6,397,070) in view of Soliman (Patent No. 5,859,838). However, contrary to the assertions of the Office Action, several elements appearing in each of claims 1-18 are completely absent from both Black and Soliman. Accordingly, the rejections are improper and should be withdrawn.

As explained in the application:

The present invention relates to a method and apparatus for implementing common rate control in a reverse link channel in a CDMA network. In the various embodiments described herein, the mobile stations maintain an estimate of their current transmit power and use the transmit power estimate to compute a rate change probability. . . .

In one embodiment of the invention, the base station transmits a target transmit power to the mobile stations. Each mobile station updates the transmit power based on periodic load indications from the base station.

(Application, p. 3, lines 11-23; emphasis added.)

Accordingly, independent claims 1 and 10, as amended, each require the transmissions of a “periodic load indication” and a “target mobile transmit power” to a mobile station. The “target

mobile transmit power” is a parameter sent to mobile stations representing the transmit power that should be maintained by each mobile station on the reverse link channel. (See Application, p. 10, line 24 – p. 11, line 1.)

Neither reference teaches either of these transmissions.

Black describes a method and apparatus for estimating reverse link loading in a wireless communication system. (Black, Abstract.) Black suggests several ways that reverse link loading might be controlled once the reverse link loading is estimated. But Black never discloses, nor even hints at, the determination of a “desired target transmit power based on the estimated reverse link load,” as required by claims 1 and 10. Neither does Black disclose the “transmitting of the target transmit power to at least one mobile station,” as required by both claims.

Applicant suggests that Examiner may have misunderstood “target transmit power,” which appeared in the original claims, to refer to a transmit power level used by the transmitting *base station*. Accordingly, independent claims 1 and 10 and the remaining claims, where applicable, have been amended to read “target mobile transmit power,” for clarification.¹

The Office Action further asserts that “Soliman teaches transmitting a periodic load indication indicative of the reverse link load on a common control channel to one or more mobile stations,” as required by both claims 1 and 10. (The Office Action acknowledges that Black is silent on this element.) Applicant submits that Soliman in fact teaches nothing of the kind.

¹ Applicant believes that the original term was unambiguous in the context of the claims, especially in light of the specification. For example, claim 1 originally included the limitation “transmitting the target transmit power to at least one mobile station.” If the “target transmit power” referred to a base station power level, rather than a parameter sent to the mobile station, then the limitation would more naturally be expressed as “transmitting *at* the target transmit power to at least one mobile station.” The same reasoning applies to claim 10. Thus, Applicant submits that the present amendments are not submitted for reasons related to patentability, i.e. to avoid the prior art, but rather simply to clarify the issues and speed allowance.

Soliman discloses a system for monitoring the reverse link loading conditions in a CDMA wireless communications system. Soliman's system comprises a monitoring device, which may be a modified mobile station, that periodically initiates a call, is assigned to a traffic channel "normally," and records various data related to mobile station transmit power and mobile station received power. According to Soliman, the monitoring device may use this information to infer the real-time loading conditions at the base station. (Soliman, col. 3, lines 35-49.)

Although Soliman's load monitoring device may be in periodic communication with the base station, (Soliman, col. 6, lines 60-62), this is for the purpose of the measurements performed by the monitoring device. Nowhere does Soliman teach transmitting a periodic load indication indicative of the reverse link load on a common control channel to one or more mobile stations.

Both Black and Soliman are generally related to the problem of estimating the reverse link load in a CDMA system. Estimating a reverse link load is but *one* element of independent claims 1 and 10. Black and Soliman are completely silent on other elements of claims 1 and 10, as shown above, and the rejections of claims 1 and 10 therefore must fail. Claims 2-9 and 11-17 are dependent on claims 1 and 10, respectively. Because the elements of claims 1 and 10 are not taught by the cited references, and because those elements are included in each of the dependent claims, the rejection of claims 2-9 and 11-17 also must fail.

Claim Rejections – 35 U.S.C. §(103) – Claims 19-20 and 34-35

The Office Action rejects claims 19-20 and 34-35 under 35 U.S.C. §103(a) as obvious over Black (Patent No. 6,397,070) in view of Attar et al. (Pub. No. 2004/0202136). However, contrary to the assertions of the Office Action, several elements appearing in each of the rejected claims are completely absent from both Black and Attar. Accordingly, the rejections are improper and should be withdrawn.

Independent claims 19 and 34 of the present application require that a mobile station determine, i.e. compute, “a rate change probability as a function of a current transmit power of the mobile station.” The rate change probability is the probability that the mobile station will change its transmit power in the next rate change interval. (Application, p. 3, lines 12-16.)

The Office Action asserts that the above element is taught by Black. In fact, Black does not teach this element, and never even hints at the concept of a “rate change probability.” The cited sections of Black discuss measures that might be taken in the event of excessive reverse link loading. Black discloses a base station transmitting a signal indicating that it has reached a reverse link loading limit. In response, mobile stations adjust their transmissions. Black says that this adjustment may include data rate changes, or power level changes, or both. But, Black makes no mention of a rate change probability at all, and certainly no mention of “determining a rate change probability as a function of a current transmit power,” as required by independent claims 19 and 34.

Because Black fails to teach the above-described element, the teachings of Attar are irrelevant. Accordingly, the rejection of claims 19 and 34 should be withdrawn.

Claims 20 and 35 are dependent upon claims 19 and 34, respectively. Therefore, the rate change probability element discussed above is incorporated into claims 20 and 35. Because this element is absent from the cited references, as described above, the rejection of claims 20 and 35 fails as well, and should be withdrawn.

Claim Rejections – 35 U.S.C. §(103) – Claims 21-48

The Office Action rejects claims 21-48 under 35 U.S.C. §103(a) as obvious over Black (Patent No. 6,397,070) in view of Attar et al. (Pub. No. 2004/0202136) and further in view of Soliman (Patent No. 5,859,838). These rejections depend on the arguments made by the Examiner for claims 19 and 34, as discussed above. Because these arguments fail, as discussed above, these rejections are also improper, and should be withdrawn.

Closing

Applicant believes that in light of the above arguments all of the claims, as amended, are in condition for immediate allowance. Applicant respectfully requests that the rejections of all claims be withdrawn, and the application passed to allowance. Applicant looks forward to the Office's Notice of Allowance.

The undersigned attorney would welcome a telephone call should any issues in this matter remain unresolved.

Respectfully submitted,

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